AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer claims indicated as cancelled. The following Listing of Claims is intended to replace all prior versions and/or listings of claims in the application:

Listing of Claims

1. (**Currently Amended**) A method of controlling a radio frequency (RF) output power level of a repeater having a downlink section and an uplink section, the method comprising:

   sampling, in at least one section of said downlink and uplink sections of the repeater, traffic load characteristics from an input RF signal received by said section during operation of a network associated with the repeater;

   adjusting a gain of at least one component of said section of the repeater based on said traffic load characteristics; and

   sustaining the output power level of said section of said repeater substantially at a desired, predefined, level during operation of said network.

2. (**Original**) The method according to claim 1, wherein said sampling comprises sampling a parameter related to changing paths of actual levels of traffic.

3. (**Original**) The method according to claim 1, wherein said sampling comprises repeatedly sampling said traffic load characteristics according to a predetermined scheme.

4. (**Original**) The method according to claim 1, wherein said sampling comprises automatically sampling said traffic load characteristics at predetermined time intervals.

5. (**Currently Amended**) The method according to claim 1, wherein said sampling comprises sampling said traffic load characteristics by one or more components of [[a]] the down-link section of said repeater.

6. (**Currently Amended**) The method according to claim 1, wherein said sampling comprises sampling said traffic load characteristics by one or more components of [[an]] the up-link section of said repeater.

7. (**Cancelled**)

8. (**Previously Presented**) The method according to claim 1, wherein said predefined output power level relates to an optimal power for said traffic load characteristics.

9. (**Previously Presented**) The method according to claim 1, wherein said predefined output power level relates to a maximal power for said traffic load characteristics.

10. (**Original**) The method according to claim 1, wherein said repeater comprises a digital repeater.

11. (**Original**) The method according to claim 1, wherein said repeater comprises an analog repeater.

12. (**Currently Amended**) The method according to claim 1, ~~wherein said repeater comprises an up-link section and a down-link section, and~~ wherein said adjusting comprises adjusting the gain of one or more components of either or both said down-link section and said up-link section based on an output power level of said up-link section.

13. (**Currently Amended**) The method according to claim 1, ~~wherein said repeater comprises an up-link section and a down-link section, and~~ wherein said adjusting comprises adjusting the gain of one or more components of said up-link section based on a gain of at least one component of said down-link section.

14. (**Currently Amended**) The method according to claim 1, further comprising:

monitoring a parameter of one or more components of said repeater to detect an oscillation event; and

if an oscillation event is detected, proactively modifying the gain of one or more components of said repeater according to a predetermined scheme.

15. (**Currently Amended**) ~~An apparatus to amplify a radio frequency (RF) output power level of a repeater, the apparatus comprising:~~

A repeater comprising a downlink section and an uplink section, wherein at least one section of said downlink and uplink sections comprises:

a receiver to receive a Radio Frequency (RF) input signal;

an attenuator to produce an attenuated signal by attenuating a parameter of ~~an~~ the RF input signal;

a power amplifier to produce an output signal by amplifying said attenuated signal;

a power monitor to monitor the power level of said output signal; and

a RF gain controller ~~able~~ to sample traffic load characteristics of the RF input signal during operation of a network associated with the repeater, to adjust the power level of said output signal by controlling the gain of said RF input signal by said attenuator based on the sampled traffic load characteristics ~~sampled during operation of a network~~, and to sustain the output power level of said repeater substantially at a desired, predefined, level during operation of said network.

16. (**Currently Amended**) The repeater ~~apparatus~~ according to claim 15, wherein said RF gain controller is able to sample said traffic load characteristics.

17. (**Currently Amended**) The repeater ~~apparatus~~ according to claim 16, wherein said gain controller is adapted to repeatedly sample said traffic load characteristics.

18. (**Currently Amended**) The repeater ~~apparatus~~ according to claim 16, wherein said gain controller is adapted to automatically sample said traffic load characteristics at predetermined time intervals.

19. **(Currently Amended)** The repeater ~~apparatus~~ according to claim 16, wherein said gain controller is adapted to sample said traffic load characteristics upon request.

20. **(Currently Amended)** The repeater ~~apparatus~~ according to claim 15, wherein said gain controller is adapted to sustain a substantially predefined output ~~signal~~ power level of one or more devices communicating in said network during the operation of said network.

21. **(Currently Amended)** A system for adjusting a radio frequency (RF) output power level of a repeater, wherein the repeater comprises a downlink section and an uplink section, wherein the system is comprised in a section selected from the group consisting of said downlink and uplink sections, the system comprising:

a receiver to receive a RF input signal;

a filtering unit configured to pass frequency components of the RF input signal at or around a frequency band of a predefined communication channel;

an attenuator to produce an attenuated signal by attenuating a parameter of said RF input signal;

a power amplifier unit to sample traffic load characteristics of the RF input signal during operation of a network associated with the repeater, and to adjust the RF output power level of said repeater to a desired level by adjusting a gain of one or more components of said system based on the sampled traffic load characteristics ~~sampled~~ during operation of [[a]] the network; and

a microprocessor to receive an input responsive to said RF output power level and, based on said input, to provide adjustment control signals to said receiver and said attenuator, to sustain the output power level of said repeater substantially at a desired, predefined, level during operation of said network.

22. **(Currently Amended)** The system according to claim 21, wherein either or both of said receiver and said attenuator are able to adjust the RF input signal received by said receiver to a desired input level based on said adjustment control signals.

23. (**Original**) The system according to claim 21, wherein either or both of said receiver and said attenuator are able to adjust a parameter of the frequency components passed by said filtering unit based on said adjustment control signals.

24. (**Currently Amended**) The system according to claim 21, wherein said power amplifier unit comprises:

an additional attenuator to reduce the amplitude of said RF input signal;

a high-power amplifier to increase the power of said RF input signal;

a power monitor to monitor the level of said power output; and

a RF gain controller circuit able to adjust said additional attenuator to reduce the amplitude of said RF input signal according to multiple samples of said traffic load characteristics sampled during operation of a said network.

25. (**Currently Amended**) The system according to claim 21, wherein said filtering unit comprises:

an analog to digital converter to generate a digital signal correlated to the received RF input signal;

a digital filter configured to pass frequency components at or around the frequency band of said communication channel and to exclude frequency components indicative of interference signals correlated to the digital signal; and

a digital to analog converter to generate an analog signal correlated to the filtered digital signal.

26. (**Previously Presented**) The system according to claim 21, wherein said microprocessor is able to monitor oscillations of the system and, upon detecting an oscillation event, to cause one or more components of the system to modify the gain of one or more components of the system according to a predetermined scheme.

27. (**Previously Presented**) The system according to claim 26, wherein said microprocessor is able to modify the gain of said one or more components by sending to said one or more components control signals responsive to a desired modification according to said predetermined scheme.